REMARKS

In the Final Office Action, the Examiner noted that claims 8-13 are pending in the application and that claims 8-13 stand rejected. None of the claims are amended by this response.

In view of the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. Thus the Applicant believes that all of these claims are now in allowable form.

Rejections

A. 35 U.S.C. § 102

The Examiner rejected claims 8-13 under 35 U.S.C. § 102(b) as being anticipated by Shih et al. (U.S. Patent 5,543,977, hereinafter "Shih"). The rejection is respectfully traversed.

The Examiner alleges that regarding claim 8, Shih discloses a method comprising all of the aspects of the Applicant's invention. The Applicant respectfully disagrees.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrik Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant submits that the Shih reference fails to teach, suggest or anticipate each and every element of at least the invention as recited in the Applicant's claim 8, which specifically recites:

> "A method for controlling a search mode by means of a tape transport control in a video recorder according to the helical scan method, said video recorder being enabled for recording and/or reproduction of digital television signals in slanted tracks on a recording medium,
>
> wherein numbering of said slanted tracks is provided in a longitudinal track recording via successive control pulses during a recording of said digital television signals, and
>
> a search mode for digital television signals is carried out by evaluating said control pulses using the following steps:
>
> a) inputting a stop time of the search in a first time period;

b) determining a tape position as the start position by reading control pulses at a first tape transport speed in a second time period;

c) calculating a target position by means of a microprocessor with regard to said start position in a third time period;

d) accelerating the tape transport to a second tape transport speed by means of a tape winding device and holding said second tape transport speed during a fourth time period;

e) controlling the tape transport by reading and evaluating successive control pulses with reference to the start and/or target position during said fourth time period;

f) reducing said second tape transport speed in the vicinity of the target position to said first tape transport speed in a fifth time period; and,

g) controlling the search by reading and evaluating the slanted track numbering by moving to the target position at said first tape transport speed in a sixth time period, until said target position is reached." (emphasis added).

The Applicant's invention is directed at least in part to a method for controlling a search mode in a video recorder including "calculating a target position." More specifically, in support of at least claim 1, the Applicant in the Specification specifically recites:

"In a first time period t_0-t_1, a remote control (not illustrated) or the apparatus control device is used to input a stop time which is intended to correspond to the picture content to be sought, or to a predetermined slanted track.

In a second time period t_1-t_2, the "reproduction" apparatus operating mode is used to determine a tape position as start position for the actual search, by determining the number of an arbitrary slanted track. This may be e.g. that slanted track whose number is detected first. In accordance with the D-VHS system standard, this slanted track can be assigned a corresponding CTL pulse in the CTL signal, which, in a manner known per se, is read by a stationary CTL read/write head 6 and fed to a microprocessor μP for evaluation. According to the invention, the said CTL pulse is utilized as reference signal for the start position of the actual search, which is intended to be characterized by acceleration of the tape transport to a relatively high speed v_2 (at the instant t_3), holding of the tape transport at this speed v_2 (corresponding to a fourth time period t_3-t_4), deceleration of the tape transport to a relatively low speed v_1 (corresponding to a fifth time period t_4-t_5) and moving to the target position at this tape transport speed v_1 (corresponding to a sixth time period t_5-t_6). In this case, the high speed v_2 is preferably intended to correspond to the customary rewind speed in video recorders." (See Specification, page 4, lines 7-34).

The Applicant in the Specification further recites:

> "With regard to the beginning for deceleration, a function for a residual tape determination that is provided in any case in the apparatus 1 can advantageously be used for an error correction: e.g. - depending on the realized embodiment of the apparatus with regard to the search mode according to the invention - in the case of counting errors with regard to the CTL pulse train, on account of counting errors of a tape counter connected to the tape winding device and/or on account of so-called "dropout" points on the tape 2, which do not permit any recording and hence any detection of CTL pulses.
>
> In the case where, with the recording of a digital television signal, a corresponding time coding is assigned to the respective slanted tracks (as provided e.g. in accordance with the D-VHS system standard), the time code of an arbitrary slanted track which can be detected first is preferably used as start position for the search according to the invention during the first time period t_0-t_1, in order then to control the actual search during the fourth time period t_3-t_4 by means of the microprocessor μP, preferably by counting successive CTL pulses.
>
> In the case where, with the recording of a digital television signal, no corresponding time coding should be assigned to the respective slanted tracks, the number of the slanted track detected first during the first time period t_0-t_1 is preferably used as start position for the search according to the invention, in order then to control the actual search during the fourth time period t_3-t_4 by means of the microprocessor μP, by counting successive CTL pulses.
>
> With regard to further embodiments, instead of counting successive CTL pulses during the fourth time period t_3-t_4, it is also possible to use the respective tape counter that is customary in apparatuses 1 of this type." (See Specification, page 5, line 37 through page 6, line 34).

And

> "As soon as the time code has been determined, in accordance with block 104 the tape drive is stopped in order to calculate the number of CTL pulses which is necessary until the deceleration of the tape transport in the vicinity of the target position from the speed v_2 to the speed v_1. As soon as this number of CTL pulses has been determined, in accordance with block 105 the actual search is started by the tape transport being accelerated to the speed v_2, which, for example, may at the same time be the speed provided for the rewind mode of the apparatus 1. In accordance with blocks 106 and 107, detected CTL pulses are counted in conjunction with continuous evaluation of the instantaneous counting result, in which case - as is intended to be illustrated by the return to block 106 - the tape transport speed v_2 is maintained until correspondence with the value calculated in block 104 is ascertained." (See Specification, page 7, lines 14-31).

It is clear from at least the portions of the Applicant's Specification presented above that in the invention of the Applicant, in a first time period a remote control

or the apparatus control device is used to input a stop time. In a second time period, the apparatus operating mode is used to determine a tape position as a start position for the actual search. In a third time period, the number of CTL pulses which is necessary until the deceleration of the tape transport in the vicinity of the target position from the speed v_2 to the speed v_1 is calculated as claimed in at least the Applicant's claim 1. That is, the Applicant teaches that in one embodiment of the invention, as soon as the time code has been determined, the tape drive is stopped in order to calculate the number of CTL pulses which is necessary until the deceleration of the tape transport in the vicinity of the target position from the speed v_2 to the speed v_1. In a fourth time period, as soon as this number of CTL pulses has been determined, the actual search is started by the tape transport being accelerated to the speed v_2. During the fourth time period, detected CTL pulses are counted in conjunction with continuous evaluation of the instantaneous counting result, in which case the tape transport speed v_2 is maintained until correspondence with the value calculated for the number of CTL pulses is ascertained. in a fifth time period, the tape transport is decelerated to a relatively low speed v_1 as it approaches the target position.

In contrast to the invention of the Applicant, there is absolutely no teaching, suggestion or disclosure in Shih for at least "calculating a target position" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 8. More specifically, Shih fails to teach, suggest or anticipate at least that "the tape drive is stopped in order to calculate the number of CTL pulses which is necessary until the deceleration of the tape transport in the vicinity of the target position from the speed v_2 to the speed v_1" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 8. In fact, the Examiner cites column 29, line 60 through col. 30, line 4 of Shih for anticipating the calculating step of the Applicant's claimed invention. However in direct contrast to the Applicant's claimed invention, column 29, line 60 through col. 30, line 4 of Shih specifically recites "Since the partition in which the data block is located is known, once the tape is moved so that the partition in which the data block is located is encountered, the servo slows the tape movement to no greater than preferably approximately 30 times normal recording speed so that the logical track information can be recovered."

Shih specifically teaches away from the Applicant's invention specifically where cited by the Examiner in that Shih teaches that once the tape is moved so that a partition known to contain a desired data block is encountered, the servo slows the tape movement so that the logical track information can be recovered. There is however no teaching, suggestion or disclosure in Shih for "calculating a target position" from a start position such that the tape transport is decelerated to a relatively low speed v_1 as it approaches the target position.

As such and at least because the teachings of Shih teach away from the invention of the Applicant and because Shih fails to teach, suggest or anticipate at least "calculating a target position" as taught in the Applicant's Specification and claimed in at least the Applicant's claim 8, the Applicant respectfully submits that the teachings and disclosure of Shih do not anticipate the Applicant's invention, at least with respect to claim 8. That is, the Applicant respectfully submits that Shih fails to teach each and every element of the claimed invention, arranged as in the claim as required for anticipation.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 8 is not anticipated by the teachings of Shih and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 9-13 depend either directly or indirectly from independent claim 1 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 9-13 are also not anticipated by the teachings of Shih. Therefore the Applicant submits that dependent claims 9-13 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

Conclusion

The Applicant respectfully submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,
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